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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,763	01/05/2001	David R. Williams	256/158	3927

7590 02/24/2004  
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EXAMINER

BALI, VIKKRAM

ART UNIT PAPER NUMBER

2623

DATE MAILED: 02/24/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/755,763

Applicant(s)

WILLIAMS ET AL.

Examiner

Vikram Bali

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.5.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

Art Unit: 2623

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the photo detector" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7-11 rejected under 35 U.S.C. 102(b) as being anticipated by Adcock (US 5764797).

Art Unit: 2623

With respect to claim 1, Adcock discloses a marking element for making strokes, a detector for detecting each stroke, and a processor to characterize each detected strokes, (see figure 1, numerical 14, 16 and 12, and col. 2, lines 57-66) as claimed.

With respect to claim 2 as best understood, Adcock further discloses, photo detector detects the strokes at a periodic rate which is adjusted based on input from an active feedback mechanism, (see col. 4, lines 29-33 and lines 35-39) as claimed.

With respect to claim 3, Adcock further discloses process identifies ... by comparing the combined recognized strokes ... reference strokes, (see col. 3, lines 35-43) as claimed.

With respect to claim 4, Adcock further discloses the processor comprised of a first sub processor and a second sub processor, (see col. 2, last two lines through lines first two lines and lines 35-43, first the processor model the polynomial of the handwriting and then recognize the handwriting by comparison) s claimed.

With respect to claim 5, Adcock further discloses set of reference strokes ... polynomial ... comparison to characterizes the strokes, (see col. 2, last two lines through lines first two lines and lines 35-43, first the processor model the polynomial of the handwriting and then recognize the handwriting by comparison) as claimed.

With respect to claim 7, Adcock further discloses output mechanism, (see col. 3, lines 11-12, outputting to the display) as claimed.

With respect to claim 8, Adcock further discloses detector detects the strokes in the temporal order, (see col. 2, lines 61-64, the modeling is done by reading the x,y

Art Unit: 2623

location of the strokes as they are written i.e. in some sort of order "temporal" order) as claimed.

Claim 9, is rejected for the same reasons as set forth in the rejection of claims 1+2+3+5+8, because claim 9 is claiming similar subject matter as claims 1+2+3+5+8 combined.

Claims 10 and 11 is rejected for the same reasons as set forth in the rejection of claims 2 and 7, because claims 10 and 11 is claiming similar subject matter as claims 2 and 7 respectively.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 2623

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 12-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adcock (US 5764797) in view of Nagamine (US 5509087).

With respect to claim 12 Adcock discloses the invention substantially as disclose and as described above in claim 1. However, he fails to disclose, a photo emitter and a photo detector mounted on opposite sides to each other and helping to view and detect the strokes and converting the strokes in to the electronic signals, as claimed.

Nagamine teaches a handwriting detector device that includes, a photo emitter and a photo detector mounted on opposite sides to each other and helping to view and detect the strokes and converting the strokes in to the electronic signals, (see figure 2, numerical 15, 15a "photo emitters" and 16 "photo detectors" and col. 3, lines 18-20 and lines 62-65 and col. 3 last two lines to col. 4 first two lines for processing in CPU i.e. converting the signals into electronics in order to process the signals) as claimed.

It would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references as they are analogous because they are solving similar subject matter of handwriting detection. The photo emitters and photo detectors as taught by Nagamine can be incorporated on to the surface 16 of Adcock as the photo emitter and photo detectors are located around the writing surface of Nagamine's device. This modification provides a device that will permit writing and

Art Unit: 2623

detection of the strokes performed simultaneously, (see col. 1, lines 46-50, of Nagamine).

With respect to claims 13-14, Nagamine further teaches, first and second sides are opposite, and the photo emitter and photo detector mounted adjacent to the marking element, (see figure 2, the photo emitter and detector are opposite mounted and they adjacent to the pen "marking element") as claimed.

With respect to claims 15-17, Nagamine further teaches, the photo detector detects the strokes, light and the field of vies are centered upon the marking element, and photo emitter emits and photo detector detects the light, (see col. 3, lines 29-34, the detector detects the lights by reading the x,y coordinates of the pen at intervals of times in order to recognize the hand writing) as claimed.

With respect to claim 18, it is well known in the field of recognition to use the pulsed light in order to recognize the characters. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to simply use the pulsed light to detect the handwriting.

Claim 19 is rejected as claim 12, further more Nagamine teaches the second detector mounted on a third side of the device (see col. 3, lines 59-62 the detector are located as L shape) as claimed.

Claims 20-26 is rejected as claims 13-18, because claims 20-26 are claiming subject matter similar as claims 13-18.

Claim 27 is rejected as claim 19, because claim 27 is claiming subject matter similar as claim 19.

Art Unit: 2623

With respect to claim 28, it is well known in the art to have different shape of photo emitters like round, square etc.. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to simply use the photo emitters of ring shape as it is conventional.

Claims 29-35 is rejected as claims 13-18, because claims 29-35 are claiming subject matter similar as claims 13-18.

Claim 36 is rejected as claim 12, because claim 36 is claiming subject matter similar as claim 12.

Claim 37 is rejected as claim 28, because claim 37 is claiming subject matter similar as claim 28.

Claims 38-45 is rejected as claims 13-18, because claims 38-45 are claiming subject matter similar as claims 13-18.

8. Claims 46-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adcock (US 5764797) in view of Sato et al (US 5027115).

With respect to claim 46 Adcock discloses the invention substantially as disclose and as described above in claim 1. However, he fails to disclose, marking element comprises a ball, as claimed. Sato teaches marking element comprises a ball, (see figure 3B a marking element a ball) as claimed.

It would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references as they are analogous because they are solving similar subject matter of handwriting detection. The marking element as taught



Art Unit: 2623

by Sato can be incorporated in place of the electronic pen of Adcock as the electronic pen has the same function as the pen taught by Sato. This modification provides a pen type computer input device that is small can also easily be handled like the writing device.

With respect to claim 47, Sato further teaches the first and second microfeeler, (see figure 5 numerical 18a and 18b), as claimed.

With respect to claim 48, Sato further teaches first side, second side and the z-axis are orthogonal and z-axis passes through the center of the ball, (see figure 5) as claimed.

With respect to claim 49, Sato further teaches magnetic changes are detected, (see figure 5 and col. 3, lines 56-60) as claimed.

With respect to claim 50, Sato further teaches the ball comprises a plurality of discrete magnetic domains, (see figure 5, numerical 18a and 18b) as claimed.

Claim 54 and 58 are rejected for the same reasons as set forth in the rejection of claim 50, because claims 54 and 58 is claiming subject matter similar as claim 50.

Claims 51-53, 55-57 and 59-61 are rejected for the same reasons as set forth in the rejection of claims 47-49, because claims 51-53, 55-57 and 59-61 are claiming subject matter similar as claims 47-49.

Claims 62-72 are rejected for the same reasons as set forth in the rejection of claims 1-61, because claims 62-72 are apparatus claims for the method claims 1-61.

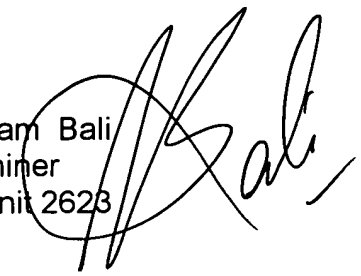
Art Unit: 2623

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 703.305.4510. The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703.308.6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vikkram Bali  
Examiner  
Art Unit 2623



vb  
February 19, 2004